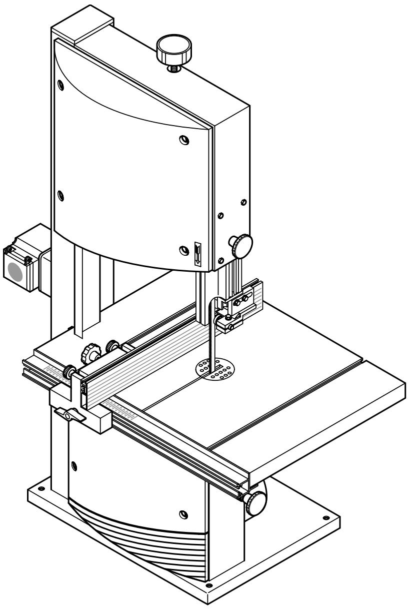
ELEKTRA BECKUM

metabo germany

English only



BAS 316G DNB / BAS 316G WNB

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IT Manuale d’istruzioni 39
ES Manual de uso 51

115 166 9103 / 4802 - 1.1

D DEUTSCH

KONFORMITÄTSERKLÄRUNG

Wir erklären in alleiniger Verantwortlichkeit, dass dieses Produkt mit den folgenden Normen übereinstimmt* gemäß den Bestimmungen der Richtlinien**
EG-Baumusterprüfung *** durchgeführt von ****

ENG ENGLISH

DECLARATION OF CONFORMITY

We herewith declare in our sole repsonsibility that this product complies with the following standards*
in accordance with the regulations of the undermentioned Directives**
EC type examination *** conducted by ****

F FRANÇAIS

DECLARATION DE CONFORMITE

Nous déclarons, sous notre seule responsabilité, que ce produit est en conformité avec les normes ou documents normatifs suivants* en vertu des dispositions des directives **
Contrôle européen du modèle type *** effectué par ****

NL NEDERLANDS

CONFORMITEITSVERKLARING

Wij verklaren als enige verantwoordelijke, dat dit product in overeenstemming is met de volgende normen*
conform de bepalingen van de richtlijnen** EG-typeonderzoek *** uitgevoerd door ****

IT ITALIANO

DICHIARAZIONE DI CONFORMITÀ

Noi dichiariamo sotto la nostra esclusiva responsabilità che il presente prodotto è conforme alle seguenti norme* in conformità con le disposizioni delle normative ** Omologazione CE *** eseguita da ****

ES ESPAÑOL

DECLARACION DE CONFORMIDAD

Declaramos bajo nuestra exclusiva responsabilidad, que el presente producto cumple con las siguientes normas* de acuerdo a lo dispuesto en las directrices** Homologación de tipo CE *** llevada a cabo por ****

PT PORTUGUÊS

DECLARAÇÃO DE CONFORMIDADE

Declaramos sob nossa responsabilidade que este produto está de acordo com as seguintes normas* de acordo com as directrizes dos regulamentos ** controle de amostra de Construção da CE *** efectuado por ****

SV SVENSKA

FÖRSÄKRAN OM ÖVERENSSTÄMMELSE

Vi försäkrar på eget ansvar att denna produkt överensstämmer med följande standarder* enligt bestämmelserna i direktiven**
EG-materialprovning *** genomfört av ****

FIN SUOMI

VAATIMUKSENMUKAISUUSVAKUUTUS

Vakuutamme, että tämä tuote vastaa seuraavia normeja* on direktiivien määräysten mukainen**
EY-tyyppitarkastustesti *** testin suorittaja: ****

NO NORGE

SAMSVARSERKLÆRING

Vi erklærer under eget ansvar at dette produkt samsvarer med følgende normer* henhold til bestemmelsene i direktiv**
EU-typegodkjennelse *** utstilt av ****

DA DANSK

OVERENSSTEMMELSESATTEST

Hermed erklærer vi på eget ansvar, at dette produkt stemmer overens ed følgende standarder* iht bestemmelserne i direktiverne** EF-typekontrol *** gennemført af ****

POL POLSKI

OŚWIADCZENIE O ZGODNOŚCI

Oświadczamy z pełną odpowiedzialnością, że niniejszy produkt odpowiada wymogom następujących norm* według ustaleń wytycznych **Kontrola wzorców UE *** przeprowadzone przez ****

EL ΕΛΛΗΝΙΚΑ

ΔΗΛΩΣΗ ΑΝΤΙΣΤΟΙΧΕΙΑΣ

Δηλώνουμε με ιδία ευθύνη ότι το προϊόν αυτό αντιστοιχεί στις ακόλουθες προδιαγραφές*
σύμφωνα με τις διατάξεις των οδηγιών**
Έλεγχος-ΕΟΚ δομικού πρωτοτύπου*** πραγματοποιούμενος από το****

HU MAGYAR

MEGEGYEZŐSÉGI NYILATKOZAT

Kizárólagos felelősségünk tudatában ezennel igazoljuk, hogy ez a termék kielégíti az alábbi szabványokban lefektetett követelményeket*
megfelel az alábbi irányelvek előírásainak**
által végzett vizsgálat szerint megegyezik az alábbi építési mintapéldánnyal *** a ****

BAS 316 G

*EN 61029, E DIN VDE 0740 - 504, EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3, DIN EN 62079

** 98/37/EG, 89/336/EWG, 73/23/EWG, 93/68/EWG

*** BM 2010949

**** TÜV-Rheinland, Am Grauen Stein, D-51105 Köln

Ing. grad. Hans-Joachim Schaller
Leitung Entwicklung und Konstruktion

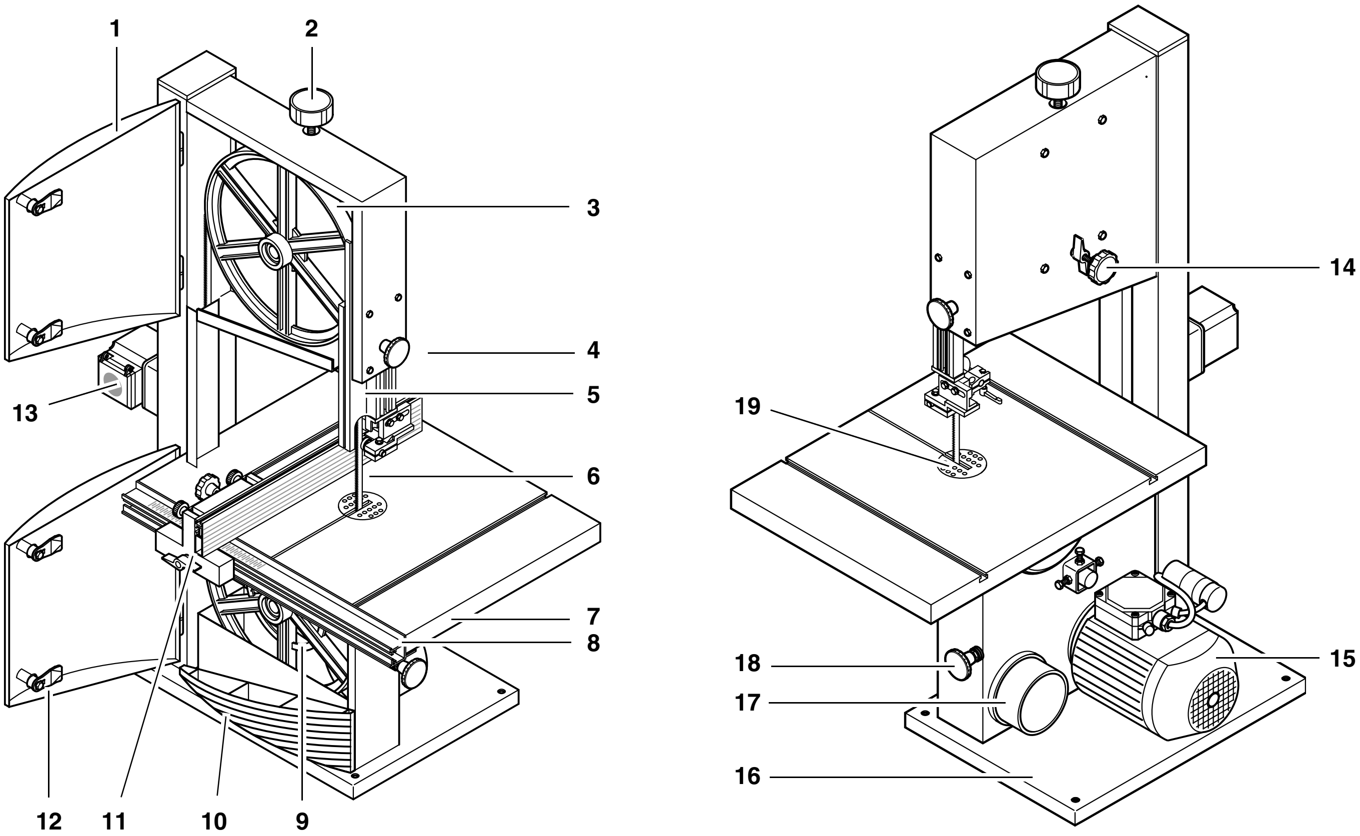
CE

Metabowerke GmbH
Business Unit Elektra Beckum
Daimler Str. 1
D - 49716 Meppen

Meppen, 22.08.2002

1001095/ 02

1. Parts identification (standard delivery)



Front

1 Upper housing door

2 Setting knob for band saw blade tension

3 Upper band saw wheel

4 Setting knob for blade guard

5 Blade guard

6 Band saw blade

7 Saw table

8 Fence guide extrusion, graduated

9 Lower band saw wheel

10 Chip case

11 Rip fence

12 Lower housing door

13 On/Off switch with emergency stop

Rear

14 Setting knob for blade tracking adjustment

15 Motor

16 Machine base

17 Dust extraction port

18 Setting knob for drive belt

19 Table insert

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2. Please read first!

These instructions have been written in a way which facilitates learning of how to safely operate your saw. Here is a guide on how you should read these instructions:

– Read these instructions before use. Pay special attention to the safety information.
– These instructions are intended for persons having a basic technical knowledge of the operation of machines such as the one described herein. If you have no experience whatsoever, we strongly recommend to seek the advise of an experienced person.
– Keep all documents supplied with this machine for future reference. Retain proof of purchase in case of warranty claims.
– If you lend or sell this machine be sure to have all machine documents supplied go with it.
– The equipment manufacturer is not liable for any damage resulting from neglect of these operating instructions.

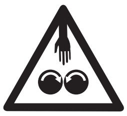
Information in these instructions is denoted as under:



Danger!
Risk of personal injury or environmental damage.



Risk of electric shock!
Risk of personal injury by electric shock.



Drawing-in/trapping hazard!
Risk of personal injury by body parts or clothing being caught.



Caution!
Risk of material damage.



Note:
Additional information.

– Numbers in illustrations (**1**, **2**, **3**, ...)
  – indicate component parts;
  – are consecutively numbered;
  – relate to the corresponding number(s) in brackets **(1)**, **(2)**, **(3)** ... in the neighbouring text.
– Instructions to be carried out in a certain sequence are numbered.
– Instructions which can be carried out in any sequence are marked by a bullet (•).
– Listings are marked by an En dash (–).

3. Safety

3.1 Specified conditions of use

This bandsaw is suitable for cutting wood, plastics, metals (no hard metal or hardened metal).

Do not cut round stock transverse to its longitudinal axis without suitable jigs or fixtures. The rotating saw blade could turn the workpiece.

When sawing thin stock layed on edge, a suitable guide must be used for firm support.

Any other use is not as specified. The manufacturer is not liable for any damage caused by unspecified use.

Modification of the machine or use of parts not approved by the equipment manufacturer can cause unforeseeable damage!

3.2 General safety information

- When using this tool observe the following safety instructions, to exclude the risk of personal injury or material damage.
- Please also observe the special safety instructions in the respective chapters.
- Where applicable, follow the legal directives or regulations for the prevention of accidents pertaining to the use of band saws.

General hazards!

- Keep your work area tidy – a messy work area invites accidents.
- Be alert. Know what you are doing. Set out to work with reason. Do not operate tool while under the influence of drugs, alcohol or medication.
- Consider environmental conditions: keep work area well lighted.
- Prevent adverse body positions. Ensure firm footing and keep your balance at all times.
- When working long stock use suitable supports.
- Do not operate tool near inflammable liquids or gases.
- The machine shall only be started and operated by persons familiar with bandsaws and who are at any time aware of the dangers associated with the operation of such tool. Persons under 18 years of age shall use this tool only in the course of their vocational training, under the supervision of an instructor.
- Keep bystanders, particularly children, out of the danger zone. Do not permit other persons to touch the tool or power cable while it is running.
- Do not overload tool – use it only within the performance range it was designed for (see “Technical specifications”).

Danger! Risk of electric shock!

- Do not expose tool to rain.
  Do not operate tool in damp or wet environment.

Prevent body contact with earthed objects such as radiators, pipes, cooking stoves, refrigerators when operating this tool.

- Do not use the power cable for any purpose it is not intended for.

Risk of injury by moving parts!

- Do not operate the tool without installed guards.
- Always keep sufficient distance to the band saw blade. Use suitable feeding aids, if necessary. Keep sufficient distance to driven components when operating this tool.
- Wait for the band saw blade to come to a complete stop before removing cutoffs, scrap, etc. from the work area.
- Cut only stock of dimensions that allow for safe and secure holding while cutting.
- Do not attempt to stop the band saw blade by pushing the workpiece against its side.
- Ensure tool is disconnected from power supply before servicing.
- Ensure that when switching on (e.g. after servicing) no tools or loose parts are left on or in the tool.
- Unplug if the tool is not used.

Cutting hazard, even with the cutting tool at standstill!

- Wear gloves when changing cutting tools.
- Store band saw blades in such manner that nobody will get hurt.

Risk of kickback (workpiece is caught by the band saw blade and thrown against the operator)!

- Do not jam workpieces.
- Cut thin or thin-walled workpieces only with fine-toothed band saw blades. Always use sharp band saw blades.
- If in doubt, check workpiece for inclusion of foreign matter (e.g. nails or screws).
- Cut only stock of dimensions that allow for safe and secure holding while cutting.
- Never cut several workpieces at the same time – and also no bundles containing several individual pieces. Risk of personal injury if individual pieces are caught by the band saw blade uncontrolled.
- When cutting round stock, use a suitable jig to prevent the workpiece from turning.

Drawing-in/trapping hazard!

- Ensure that no parts of the body or clothing can be caught and drawn in by rotating components (**no** neckties, **no** gloves, **no** loose-fitting clothes; contain long hair with hairnet).
- Never saw workpieces containing the following materials:
  - ropes
  - strings
  - cords
  - cables
  - wires.

Hazard generated by insufficient personal protection gear!

- Wear hearing protection.
- Wear safety glasses.
- Wear dust mask.
- Wear suitable work clothes.
- When working outdoors wearing of non-slip shoes is recommended.

Risk of injury by inhaled wood dust!

- Dust of certain timber species (e.g. oak, beech, ash) can cause cancer when inhaled: work only with a suitable dust collector connected to the saw. The dust collector must comply with the data stated in the technical specifications.
- See to it that only as little as possible wood dust will get into the environment:
  - Remove wood dust deposit in the work area (do not blow away!);
  - fix any leakages on the dust collector;
  - ensure good ventilation.

Hazard generated by modification of the machine, or use of parts not tested and approved by the equipment manufacturer!

- Assemble tool in strict accordance with these instructions.
- Use only parts approved by the equipment manufacturer. This applies especially for:
  - band saw blades (see “Technical specifications” for stock nos.);
  - safety devices (see “Technical specifications” for stock nos.).
- Do not change any parts.

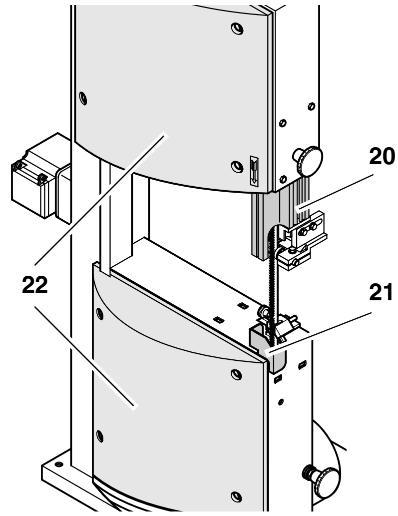
Hazard generated by tool defects!

- Keep tool and accessories in good repair. Observe the maintenance instructions.
- Before any use check tool for possible damage: before operating the tool all safety devices, protective guards or slightly damaged parts need to be checked for proper function as specified. Check to see that all moving parts work properly and do not jam. All parts must be correctly installed and meet all conditions necessary for the proper operation of the tool.
- Damaged protection devices or parts must be repaired or replaced by a qualified specialist. Have damaged switches replaced by a service centre. Do not operate tool if the switch can not be turned ON or OFF.
- Keep handles free of oil and grease.

3.3 Safety devices

Upper blade guard

The upper blade guard **(20)** protects against unintentional contact with the saw blade and from chips flying about.
In order for the upper blade guard to provide adequate protection against contact with the band saw blade, it must always be set as close as possible against the workpiece (max. distance 3 mm).

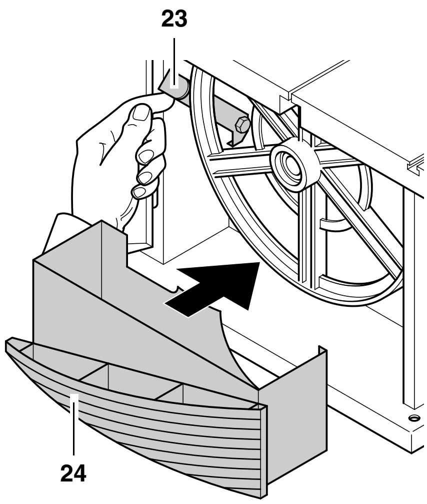


Lower blade guard

The lower blade guard **(21)** protects against inadvertent contact with the band saw blade. When closing the lower housing door, the lower blade guard swings over the band saw blade.
The lower blade guard must always be installed during operation.

Housing doors

The housing doors **(22)** protect against contact with the rotating parts inside the machine.
To lock or unlock the housing doors, turn the locks a quarter turn with a suitable slotted bit screwdriver.
The lower housing door is equipped with a door catch **(23)**. The door catch prevents the closing of the lower housing door without the chip case **(24)** being in place.



Both housing doors must be closed while the machine is in use.

Electronic motor brake

The wear-free electronic motor brake (inside the saw, not illustrated) causes the band saw blade to stop within 10 seconds after the saw is turned OFF.
If the time to standstill exceeds 10 seconds the ON/OFF switch is faulty and needs to be replaced by a qualified electrician without delay.

4. Special product features

- Cast grey iron table.
- Upper blade guide with 3 bearings.
- Chip case for convenient disposal of chips.
- Scale for cutting height.
- Up-to-date technology, designed for lasting durability and accuracy.
- GS-approved for low dust emission

5. Transporting the saw

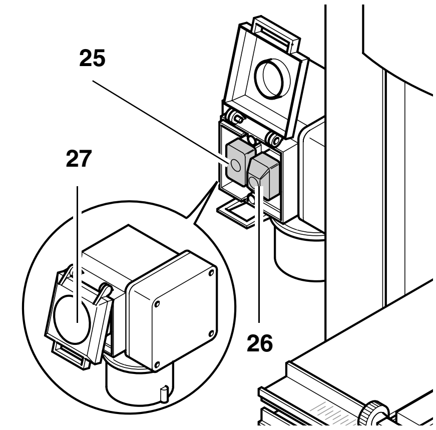
- Adjust upper blade guide to its lowest position.
- Remove projecting accessories.
- When shipping, use original packing if possible.

6. Machine details

Note:
In this chapter the essential operating elements of the machine are introduced.
The proper use of the saw is detailed in chapter “Operation”. Read this chapter before using the saw for the first time.

On/Off switch with emergency stop

- To start = press green switch button **(25)**.
- To stop = press red switch button **(26)** or cover **(27)** of the ON/OFF switch.



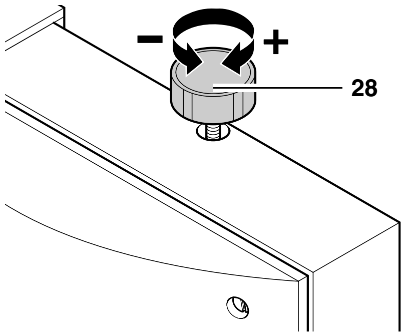
In the event of a voltage failure an undervoltage relay will trip. This prevents the machine from starting up when the power is restored. To restart, the green switch button must be pressed.

The cover of the ON/OFF switch **(27)** can be safeguarded by a padlock.

Setting knob for band saw blade tension

With the setting knob **(28)** the band saw blade tension is corrected, if necessary:

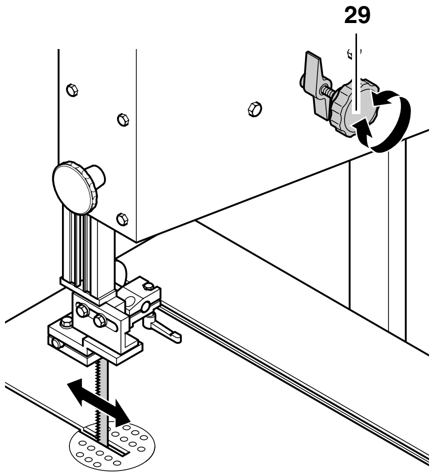
- Turning the setting knob clockwise increases the blade tension.
- Turning the setting knob counter-clockwise reduces the blade tension.



Setting knob for blade tracking adjustment

With the setting knob **(29)** the tilt of the upper band saw wheel can be adjusted, if necessary. This tracking adjustment is required to have the blade run dead centre on the rubber tyres of the band saw wheels:

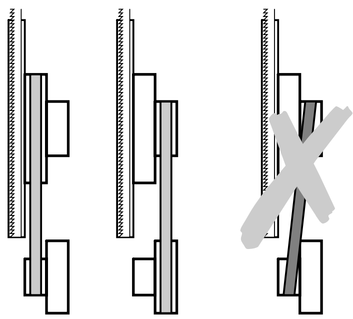
- turning clockwise = blade moves to the rear
- Turning counter-clockwise = blade moves to the front.



Speed adjustment

By shifting the drive belt the band saw can be operated at two speeds (see “Technical specifications”):

- 370 m/min for hard wood, plastics and non-ferrous metals (with special band saw blade);
- 800 m/min for all kinds of wood.



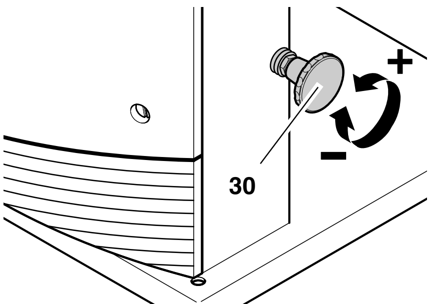
370 m/min 800 m/min

Caution!
The drive belt must not run in a diagonal position; this will damage the belt

Setting knob for drive belt tension

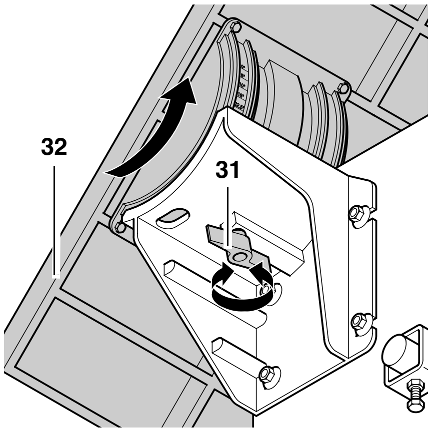
With the setting knob **(30)** the drive belt tension is corrected, if necessary:

- turning the setting knob clockwise lessens the blade tension;
- turning the setting knob counter-clockwise increases the blade tension.



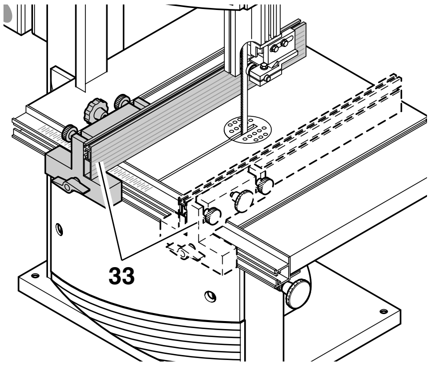
Saw table tilt

After loosening the locking screw **(31)** the saw table **(32)** tilts steplessly through 45° against the blade.



Rip fence

The rip fence **(33)** is clamped to the front. The rip fence can be used on both sides of the blade.



7. Initial operation

Danger!
Start the saw only after the following preparations have been completed:

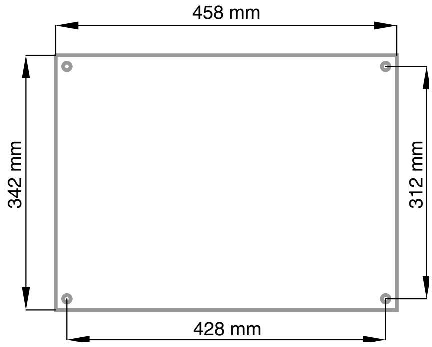
- **the saw is fastened;**
- **the saw table is installed and aligned;**
- **the V-belt tension checked;**
- **the combination switch/plug is installed;**
- **the safety devices have been checked.**

Connect the saw to the mains supply only after all of the above preparations are completed! Otherwise there is a risk of an unintentional starting of the saw, which may cause severe personal injury.

7.1 Mounting

For a firm stand the saw must be mounted on a stable supporting surface:

1. Drill four holes in the supporting surface.

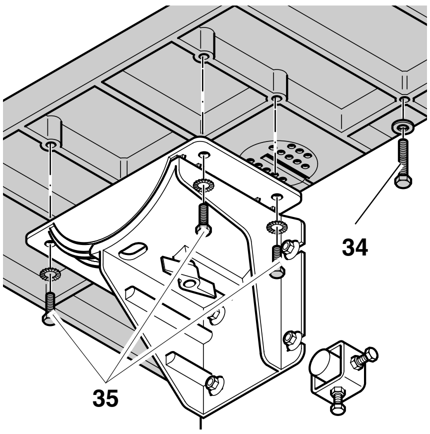


2. Put fixing bolts through the base plate and secure with nuts.

Optimal working height and stability is provided by the workstand (optional accessory), which is already prepared for mounting the saw.

7.2 Saw table installation

1. Fit limit stop screw **(34)** to the underside of the saw table.
2. Guide saw table over the band saw blade and place it on the table trunnion.
3. Attach the saw table with four each screws **(35)** and washers to the table trunnion.



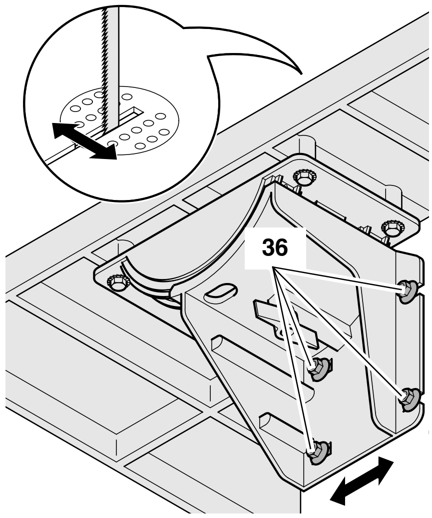
7.3 Saw table alignment

The saw table needs to be aligned in two planes

- laterally, in order for the blade to run dead centre through the table insert;
- at right angles to the band saw blade.

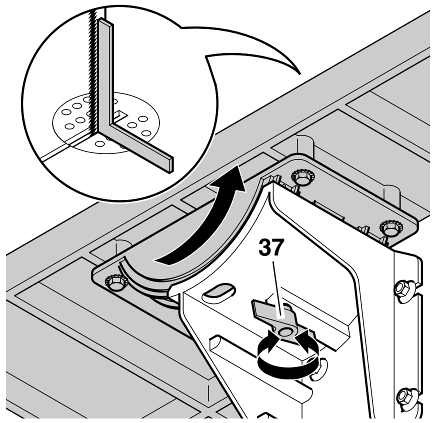
Saw table lateral alignment

1. Loosen the four fastening screws **(36)** that hold the lower table trunnion.
2. Align saw table so that the blade runs through the centre of the table insert's slot.
3. Tighten the four fastening screws **(36)** again.

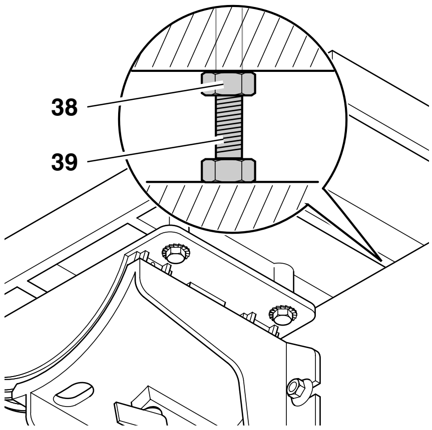


Aligning the saw table at right angles to the band saw blade

1. Raise upper blade guide fully (see “Operation”).
2. Check band saw blade tension (see “Initial operation”).
3. Loosen locking screw **(37)**.
4. Using a try square, set the table at right angles to the blade and tighten the locking screw **(37)** again.



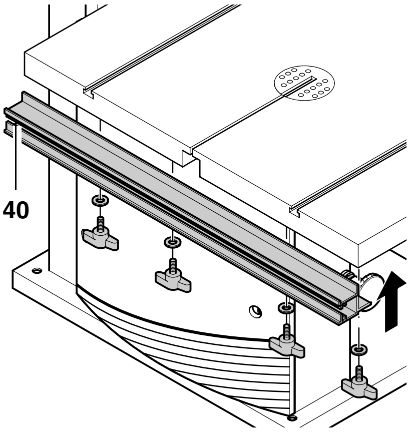
5. Loosen locking nut **(38)** and adjust limit stop screw **(39)** until it touches the saw housing.



6. Tighten locking nut.

7.4 Fence guide extrusion installation

- Fasten the fence guide extrusion **(40)** with four each thumb screws and washers to the saw table.

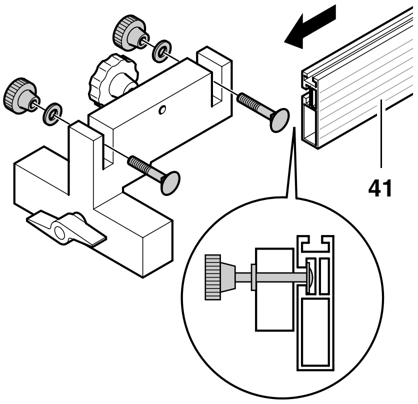


7.5 Rip fence installation

The rip fence can be used on both sides of the blade.

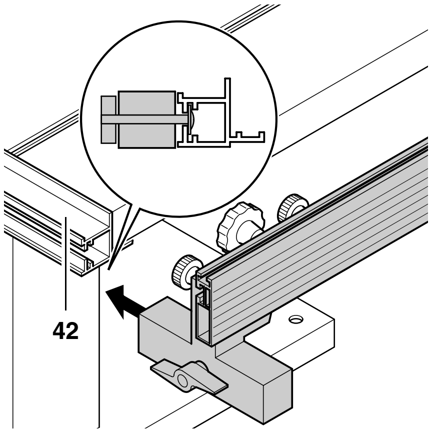
1. Fasten the fence extrusion **(41)**, using
   - two each pan-head screws,
   - two each washers and
   - two each knurled nuts

   to the fence guide.



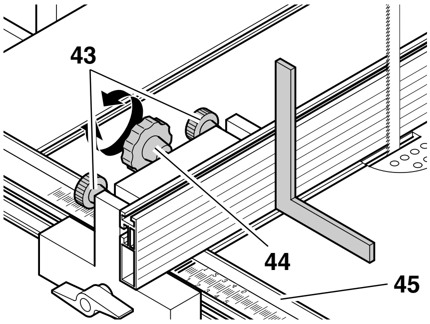
2. Attach the thus assembled rip fence with one each
   - pan-head screw,
   - washer and
   - wing nut

   to the fence guide extrusion **(42)**.



Rip fence alignment

1. Loosen the two small knurled nuts **(43)** approx. one turn.
2. Turn the large knurled thumb screw **(44)** as required to set the rip fence square against the saw table.



3. Tighten both small knurled nuts **(43)** again.

Scale installation

- Affix the self-adhesive scale **(45)** on the fence guide extrusion, so that the zero position is opposite of the band saw blade. For an exact alignment set the rip fence against the saw blade.

7.6 Dust collector connection

Danger!
Some types of saw dust (e.g. of oak, beech and ash wood) can cause cancer when inhaled: always use a dust collector when working indoors (required air speed at the saw's suction connector ≥ 20 m/s).

Caution!
Operation without a dust collector is only possible:

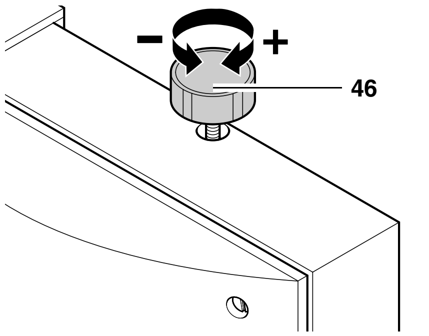
- **outdoors;**
- **for short-term operation (up to 30 minutes maximum);**
- **with dust respirator.**
- **If no dust collector is used chips will accumulate, which need to be removed periodically.**

Connect dust collector or industrial vacuum with a suitable adaptor to the dust extraction port.

7.7 Band saw blade tensioning

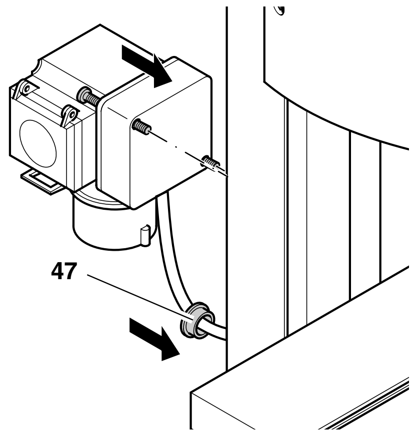
Danger!
Too much tension can cause the band saw blade to break.Too little tension can cause the driven band saw wheel to slip and the band saw blade to stop.

1. Raise upper blade guide fully (see “Operation”).
2. Check tension by pushing with a finger, halfway between table and upper blade guide, against the side of the blade. The blade should flex not more than 1-2 mm.
3. Correct tension if necessary:
   - turning the setting knob **(46)** counter-clockwise increases the blade tension.
   - turning the setting knob **(46)** counter-clockwise reduces the blade tension.



7.8 Installation of the combination switch/plug

1. Fit cable bushing **(47)** in the hole provided in the band saw frame.
2. Fasten the combination switch/plug with two screws to the band saw frame.



7.9 Mains connection

Danger! High voltage
Operate the band saw in dry surroundings only.

Operate the saw only on a power source matching the following requirements (see also “Technical specifications”):

- **fuse protection by a residual current operated device (RCD) of 30 mA sensitivity;**
- **outlets properly installed, earthed and tested;**
- **Three-phase outlets with neutral wire installed;**

Note:
Check with your local Electricity Board or your electrician if in doubt whether your house service connection meets the requirements.

Position power supply cable so it does not interfere with the work and is not damaged.

Protect power supply cable from heat, aggressive liquids and sharp edges.

Use only rubber jacketed cable of sufficient lead cross section.

Do not pull on power supply cable to unplug.

Changing the direction of rota tion (3-phase motor only):
Depending on phase sequence the band saw blade may turn in the wrong direction. This can cause the workpiece being tossed away when attempting to cut. Therefore, always check direction of rotation after every connection to the power supply.
If the direction of rotation is incorrect, the electrical connection must be changed by a qualified electrician!

1. When the saw is assembled and all safety devices are installed, connect it to the power supply.
2. Start saw briefly and turn OFF immediately again.
3. Check the band saw blade's direction of rotation: **in the cutting area it must run from the top downwards.**
4. If the band saw blade turns in the wrong correction, unplug the power supply cable at the saw.
5. Have the electrical connection changed **by a qualified electrician**!

8. Operation

Danger!
To reduce the risk of personal injury as much as possible, the following safety recommendations should be observed when operating the saw.

U**se personal protection gear:**

- **dust respirator;**
- **hearing protection;**
- **safety goggles.**

Cut only one workpiece at a time.

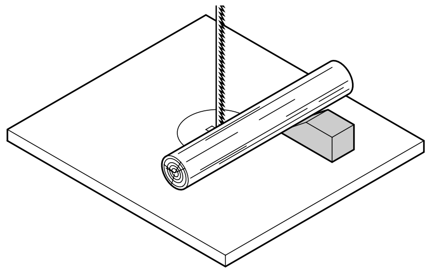
Always hold the workpiece down on the table.

Do not jam the workpiece.

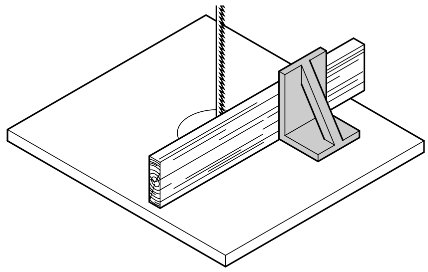
Do not attempt to stop the band saw blade by pushing the workpiece against its side.

If the type of work requires, use the following:

- **push stick – if distance rip fence – band saw blade ≤ 120 mm;**
- **work support – for long stock, which would otherwise fall off the table on completion of the cut;**
- **dust collector;**
- **an appropriate jig when cutting round stock, to keep it from turning;**



- **a suitable guide for firm support when cutting thin stock layed on edge.**



Before starting work, check to see that the following are in proper working order:

- **band saw blade;**
- **upper and lower blade guard.**

Replace damaged parts immediately.

Assume correct work position (the band saw blade's teeth must point towards the operator).

Never cut several workpieces at the same time – and also no bundles containing several individual pieces. Risk of personal injury if individual pieces are caught by the saw blade uncontrolled.

Drawing-in/trapping hazard!
Do not wear loose clothing, jewellery, or gloves, which may get caught and wound up by revolving machine parts.

Contain long hair with a hairnet.

Never cut stock to which ropes, cords, strings, cables and wires are attached or which contain such materials.

Upper blade guide adjustment

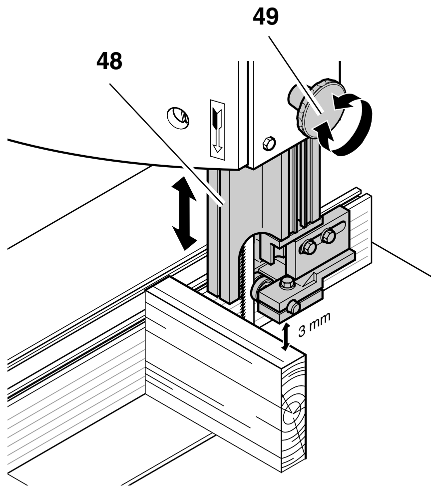
The height of the upper blade guide **(48)** needs to be adjusted:

- prior to every cutting operation, to accommodate the height of the workpiece (the upper blade guide should be set approx. 3 mm above the workpiece);
- after adjustments of band saw blade or saw table (e.g. band saw blade change, tensioning of the band saw blade, saw table alignment).

Danger!
Before adjusting the upper blade guide and saw table tilt:

- switch machine OFF.
- Wait until the band saw blade has come to a complete stop.

1. Loosen locking screw **(49)**.

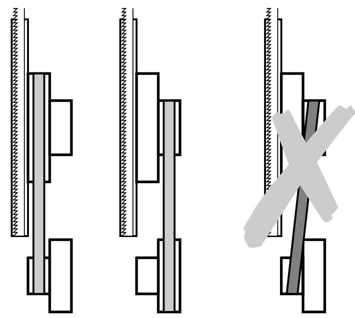


2. Slide the upper blade guide **(48)** into desired position.
3. Tighten the locking screw **(49)** again.

Cutting speed adjustment

1. Open the lower housing door.
2. Slacken V-belt by turning the crank clockwise.
3. Shift the V-belt to the desired pulley on the drive wheel (lower band saw wheel) and to the corresponding motor pulley.

Caution!
The V-belt must run either on both front or both rear pulleys. Never have the V-belt run diagonally!



370 m/min 800 m/min

- V-belt on front pulley
  = low speed, high torque.
- V-belt on rear pulleys
  = high speed, low torque.

4. Tighten the V-belt again by turning the crank counter-clockwise (halfway between the pulleys the V-belt should flex approx. 10 mm).
5. Close the lower housing door.

Information on how to set the cutting speed can also be found on the label on the inside of the lower housing door.

8.1 Sawing

1. Choose and install a table insert extrusion suitable for the type of cut to be performed:
   - table insert extrusion with a narrow slot for standard cross cuts only;
   - table insert extrusion with bevelled slot for bevel cuts also.
2. Adjust the band saw blade speed.
3. If necessary, adjust the table tilt.
4. Select rip fence and table tilt for the type of cutting operation to be carried out.
5. Set upper blade guide 3 mm above the workpiece.

Note:
Always make a trial cut in a piece of scrap to verify settings; correct if necessary before cutting the workpiece.

6. Place workpiece on the saw table.
7. Plug in.
8. Start saw.
9. Cut workpiece in a single pass.
10. Switch off if no further cutting is to be done immediately afterwards.

9. Care and Maintenance

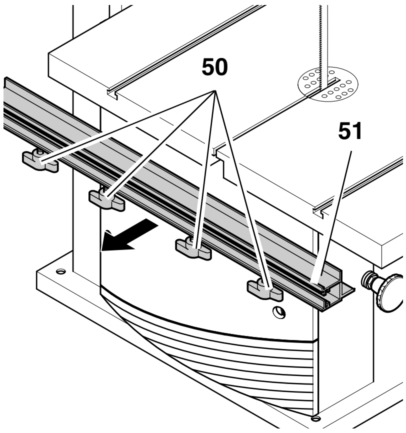
Danger!
Prior to all servicing:

- switch machine OFF.
- wait until the saw has come to a complete stop.
- unplug power cable.
- Check that all safety devices are operational again after each service.
- Replace defective parts, especially of safety devices, only with genuine replacement parts. Parts not tested and approved by the equipment manufacturer can cause unforeseen damage.
- Repair and maintenance work other than described in this section should only be carried out by qualified specialists.

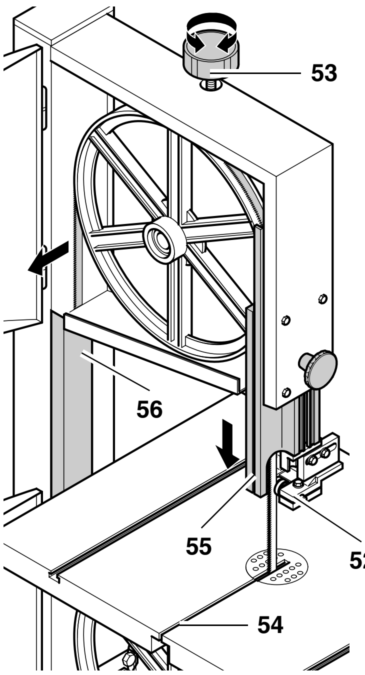
9.1 Band saw blade change

Danger!
Risk of injury, even with the band saw blade at standstill. Wear gloves when changing blades. Use only suitable band saw blades (see "Technical specifications").

1. Loosen the four thumb screws **(50)** and remove the fence guide extrusion **(51)**.



2. Open both housing doors.
3. Adjust upper blade guide **(52)** to its lowest position.
4. Loosen setting knob **(53)** until the band saw blade has slackened.
5. To remove the band saw blade, guide it through
   - the slot in the saw table **(54)**,
   - the blade guard on the upper blade guide **(55)**,
   - the blade cover on the saw housing **(56)** and
   - the blade guides.

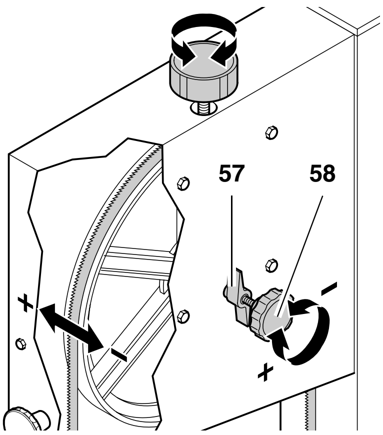


6. Fit fresh band saw blade. Observe correct position: the teeth point towards the front (door) side of the saw.
7. Center band saw blade on the rubber tyres of the band saw wheels.
8. Tighten setting knob until blade does no longer slip off the band saw wheels.
9. Close both housing doors.
10. Then:
    - tension band saw blade (see "Initial operation").
    - align band saw blade (see "Care and maintenance");
    - align blade guides (see "Care and maintenance");
    - let saw test run for at least one minute;
    - stop saw, unplug and recheck settings.

9.2 Band saw blade alignment

If the band saw blade does not run in the centre of the rubber tyres, the tracking needs to be corrected by adjusting the tilt of the upper band saw wheel:

1. Loosen locking nut **(57)**.
2. Turn setting knob **(58)**:
   - Turn setting knob **(58)** clockwise if the band saw blade runs towards the front of the saw.
   - Turn setting knob **(58)** counterclockwise if the band saw blade runs towards the rear of the saw.



3. Tighten locking nut **(57)**.

9.3 Upper blade guide alignment

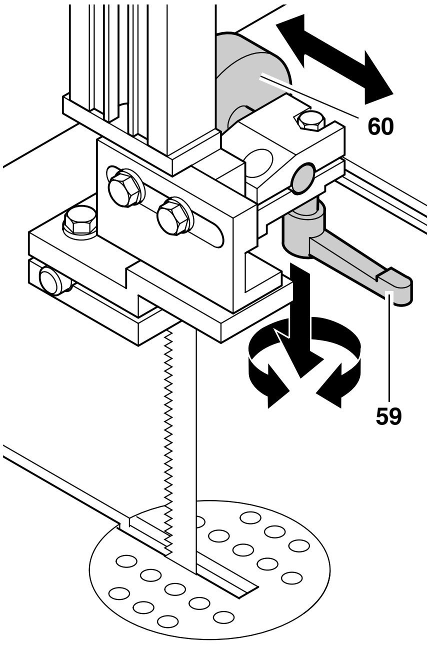
The upper blade guide consists of:

- a large thrust bearing (supports the band saw blade from the rear),
- two smaller guide bearings (providing lateral support).

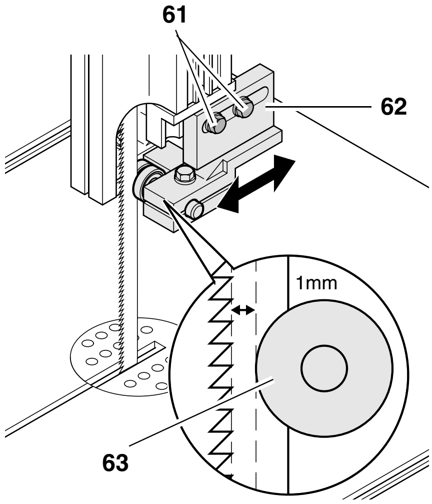
All bearings need to be readjusted after every band saw blade change and/or tracking.

Note:
Periodically check the guide bearings for wear, if necessary replace both guide bearings at the same time.

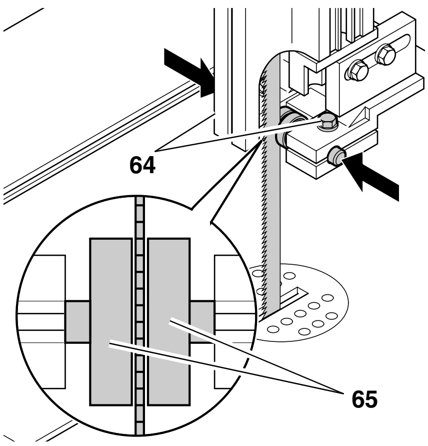
1. Turn the ratchet lock lever **(59)** to loosen the thrust bearing **(60)**, so it will easily move in the direction of arrows.



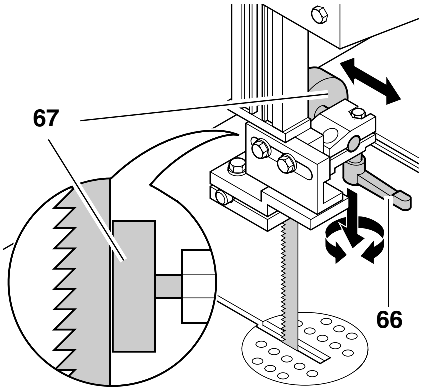
2. Loosen screws **(61)**.



3. Adjust position of guide bearing support **(62)** so that the guide bearings **(63)** are positioned approx. 1 mm behind the tooth gullet.
4. Tighten screws **(61)** again.
5. Loosen screws **(64)**.
6. Press guide bearings **(65)** together (against the band saw blade).



7. Turn the band saw wheel by hand in a clockwise direction several times to bring the guide bearings in correct position – both guide bearings should just touch the band saw blade.
8. Tighten screws **(64)** again.
9. Adjust thrust bearing position **(67)** so it just touches the band saw blade.
10. Tighten the ratchet lock lever **(66)** again.



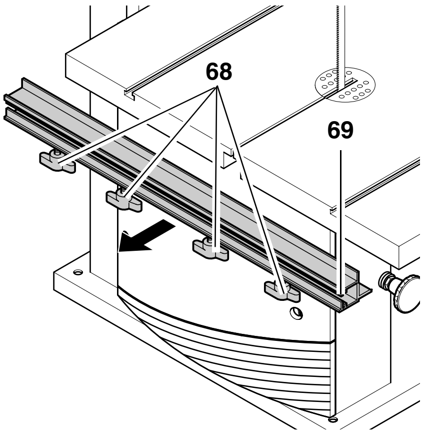
9.4 Lower blade guide alignment

The lower blade guide consists of:

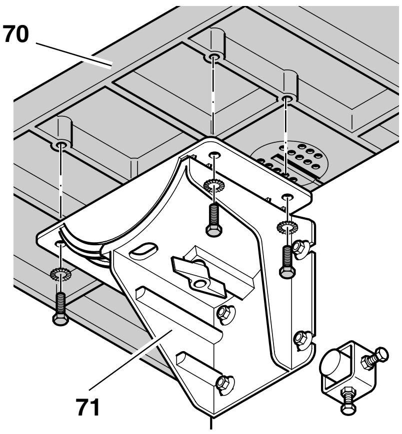
- a thrust bearing (supports the band saw blade from the rear),
- two guide pins (providing lateral support).

These need to be readjusted after every band saw blade change and/or tracking.

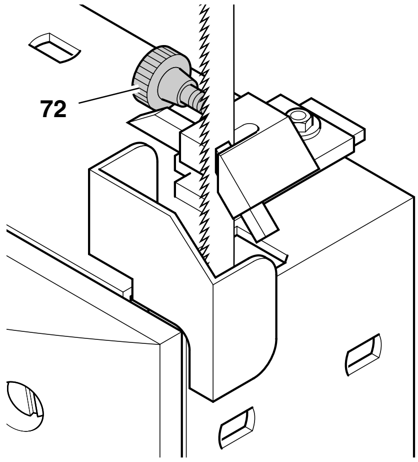
1. Loosen the four thumb screws **(68)** and remove the fence guide extrusion **(69)**.



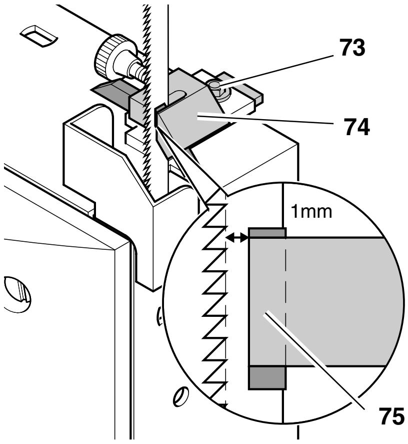
2. Remove the saw table **(70)** from the upper table trunnion **(71)**.



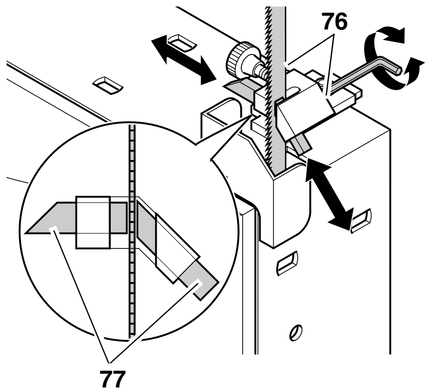
3. Raise upper blade guide fully.
4. Loosen screw **(72)** so the thrust bearing will slide back and forth easily.



5. Loosen screw **(73)**.

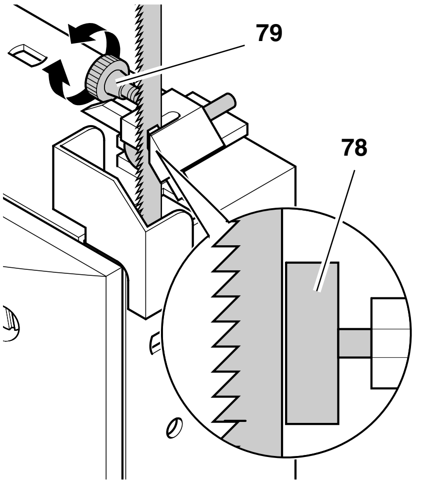


6. Adjust position of supports **(74)** so that the pilot pins **(75)** are positioned approx. 1 mm behind the tooth gullet.
7. Tighten screw **(73)** again.
8. Loosen screws **(76)** with a hex. wrench.
9. Press guide pins **(77)** together (against the band saw blade).



10. Turn the band saw wheel by hand in a clockwise direction several times to bring the guide pins in correct position – both guide pins should just touch the band saw blade.
11. Tighten screws **(76)** again.

12. Adjust thrust bearing position **(78)** so it just touches the band saw blade.
13. Tighten screw **(79)** again.

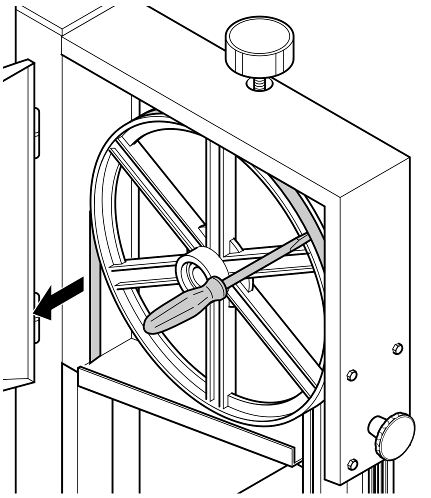


14. Reinstall the saw table on the upper table trunnion.
15. Reinstall the fence guide extrusion for the rip fence.

9.5 Band saw tyre replacement

Periodically check band saw tyres for wear. Replace only in pairs:

1. Remove band saw blade (see “Care and maintenance”);
2. Lift band saw tyre with a small screwdriver, then pull off the band saw wheel.

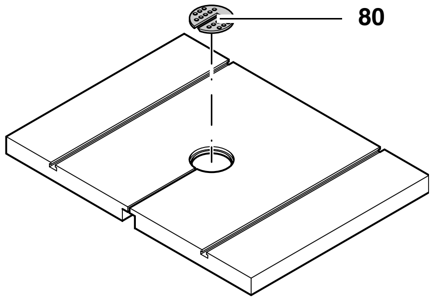


3. Mount new band saw tyres and reinstall the band saw blade.

9.6 Table insert replacement

The table insert needs replacement when its slot has become enlarged or damaged.

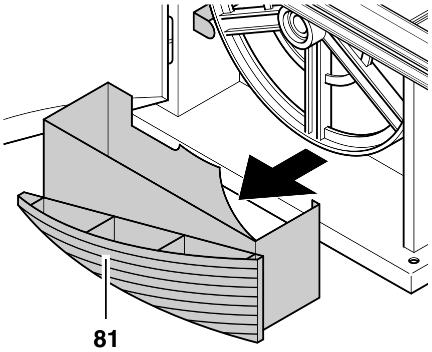
1. Remove table insert **(80)** from saw table (push up from underneath).



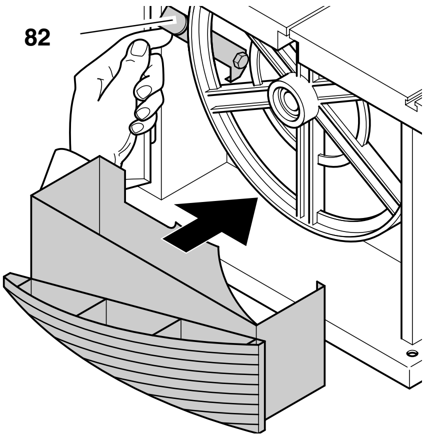
2. Fit new table insert.

9.7 Saw Cleaning

1. Open the lower housing door.
2. Remove the chip case **(81)** and empty it.



3. Remove chips and saw dust with brush or vacuum from:
   - inside of the lower band saw housing;
   - blade guides;
   - operating elements
4. Swing door catch lever **(82)** up and put the chip case back in.



9.8 Saw storage

Danger!
Store saw so that

- **it can not be started by unauthorized persons and**
- **nobody can get hurt.**

Note:
The ON/OFF switch can be safeguarded by a padlock.

Caution!
Do not store saw unprotected outdoors or in damp environment.

10. Tips and tricks

- Keep surfaces of the saw table clean – in particular, remove resin residue with a suitable cleaning and maintenance spray (optional accessory).
- Afterwards, apply a light coat of sliding compound (e.g. Waxilit).

11. Available accessories

For special tasks the following accessories are available at your specialized dealer – see back cover for illustrations:

A Workstand
for an optimal working height. Powder-coated sheet-metal construction.

B Band saw blade
induction hardened teeth,
2240 x 12 x 0.5 A6,
for general cutting of wood.

C Band saw blade
induction hardened teeth,
2240 x 6 x 0.5 A6,
for contour cutting of wood.

D Band saw blade
induction hardened teeth,
2240 x 15 x 0.5 A6,
for standard cross cutting of wood.

E Band saw blade
induction hardened teeth,
2240 x 15 x 0.5 A2,
for non-ferrous metals.

F Belt sanding attachment
for finishing cut edges.

G Sanding belt
80 grit, 2240 x 20 (pack of 3)

H Sanding belt
120 grit, 2240 x 20 (pack of 3)

I Circle cutting attachment
for sawing circles of 120 to 260 mm diameter. Optimum cutting results when used with the contour cutting blade.

J Mitre fence
for exact mitre cuts.

K Precision roller guide
provides optimum band saw blade guiding and extended service life. No tools required to adjust.

L Dust collection adapter for Ø 100 mm port.

M Dust collector
helps to protect your health and to keep the shop clean.

N WAXILIT sliding compound
improves workpiece sliding on the saw table.

O Care and maintenance spray
to remove resin residue and preserve metal surfaces.

12. Repairs

Danger!
Repairs to power tools must be carried out by qualified electricians only!

Power tools in need of repair can be sent to the service centre of your country. Refer to the spare parts list for the address.

Please attach a description of the fault to the power tool.

13. Environmental protection

The machine's packing can be 100% recycled.

Worn out power tools and accessories contain considerable amounts of valuable raw and rubber materials, which can be recycled.

These instructions are printed on paper produced with elemental chlorine free bleaching process.

14. Trouble shooting

Danger!
Before carrying out any fault service or maintenance work always:

- **switch machine OFF.**
- **unplug power cable.**
- **wait until the band saw blade has come to a complete stop.**

Check to see that all safety devices are operational after each fault service.

Motor does not run

Undervoltage relay tripped by power failure:

- switch on again.

No mains voltage:

- check cables, plug, outlet and mains fuse.

Motor overheated, e.g. by a blunt band saw blade or chip build-up in the housing:

- remove cause for overheating, let cool down for a few minutes, then start again.

Motor and band saw blade turn in the wrong direction

Incorrect phase sequence (only possible on 400 V-models):

- turn phase changer inside the combination switch/plug (see “Initial operation”).

Band saw blade coasting (≥ 10 s)

Electronic motor brake faulty:

- have ON/OFF switch replaced by a qualified electrician.

Band saw blade wanders off the line of cut or runs off the band saw wheels

Band saw blade is not running dead centre on the band saw wheels:

- correct tracking (see “Care and maintenance”).

Band saw blade breaks

Incorrect tension:

- correct band saw blade tension (see “Initial operation”).

Load too high:

- reduce pressure against band saw blade (reduced feed rate).

Incorrect band saw blade:

- replace band saw blade (see “Care and maintenance”):

  thin stock =
  narrow band saw blade,

  thick stock =
  wide band saw blade.

Band saw blade warped

Load too high:

- avoid lateral pressure on the band saw blade.

Saw vibrates

Insufficient mounting:

- Fasten saw properly to a suitable surface (see “Initial operation”).

Saw table loose:

- align and fasten saw table.

Motor mount loose:

- check fastening screws, tighten if necessary.

Dust extraction port blocked

No dust collector connected or suction capacity insufficient:

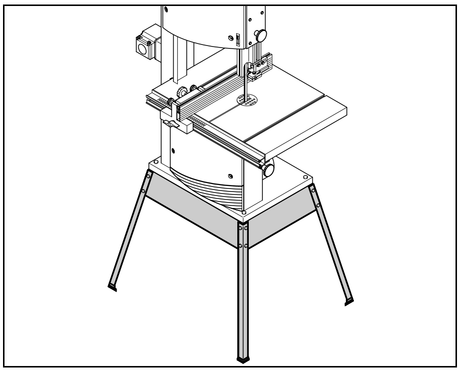
- connect a dust collector or increase suction capacity (air speed ≥20 m/sec at dust extraction port).

15. Technical specifications

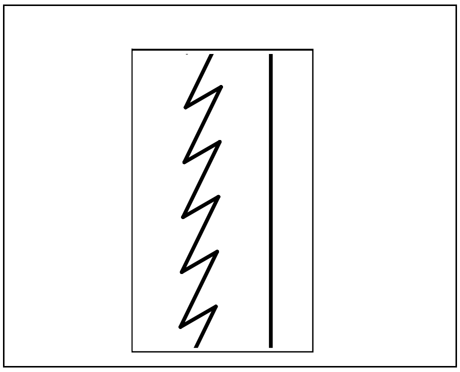
Model		BAS 316G DNB	BAS 316G WNB
Voltage	V	400 (3~ 50 Hz)	230 (1~ 50 Hz)
Capacity power input P1 effective shaft output P2	kW kW	0.74 0.55	0.74 0.55
Nominal current	A	1.5	3.5
Fuse protection	A	10 (time-lag or K-Automat)	10 (time-lag or K-Automat)
Protection class		IP 44	IP 44
Rated no-load speed	min^{-1}	1400 ±10%	1400 ±10%
Cutting speed High speed transmission ratio Low speed transmission ratio	 m/min m/min	 800 ±10% 370 ±10%	 800 ±10% 370 ±10%
Band saw blade length	mm	2240	2240
Max. throat capacity	mm	300	300
Max. capacity under guide	mm	160	160
Max. band saw blade width	mm	15	15
Max. band saw blade thickness	mm	0.5	0.5
Dimensions overall length overall width overall height length saw table width saw table	mm mm mm mm mm	590 610 1265 400 548	590 610 1265 400 548
Weight w/o accessories	kg	60	60
Noise emission values, idle running, Dust collection on A-sound pressure level L_{pA} A-sound power level L_{WA}	 dB (A) dB (A)	 84.1 73.3	 84.1 73.3
Noise emission values under load. Dust collection on A-sound pressure level L_{pA} A-sound power level L_{WA}	 dB (A) dB (A)	 85.5 79.4	 85.5 79.4

15.1 Available band saw blades

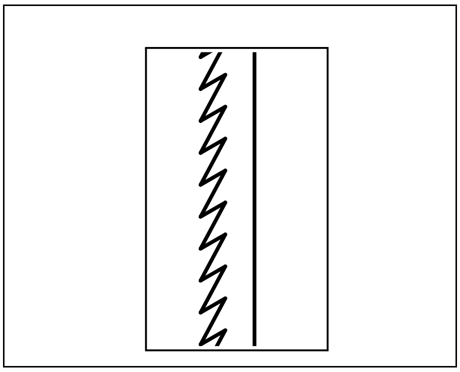
Application	Dimensions mm	Tooth spacing	Stock number
Wood general cutting	2240 x 12 x 0.5	A6	090 900 0467
Wood contour cutting	2240 x 6 x 0.5	A4	090 900 0475
Wood standard cross cutting	2240 x 15 x 0.5	A6	090 900 0483
Non-ferrous metals	2240 x 15 x 0.5	A2	090 900 0491



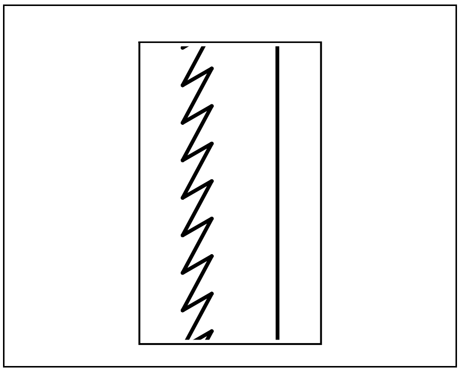
A 090 900 4276



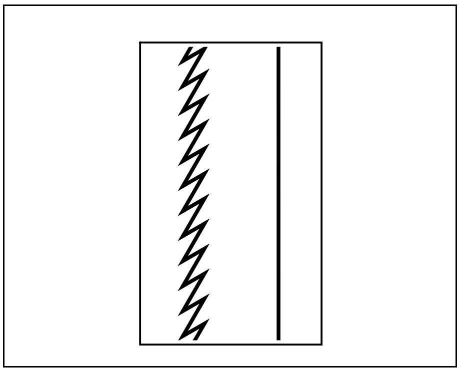
B 090 902 9244



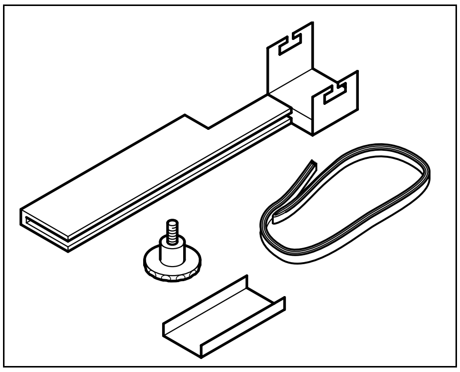
C 090 902 9252



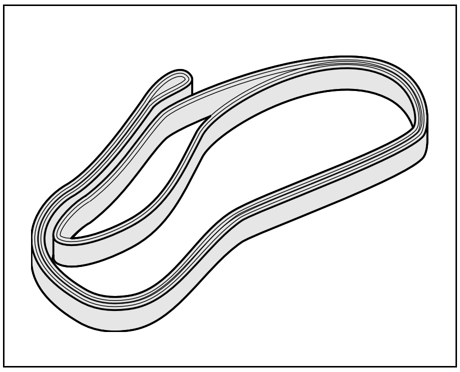
D 090 902 9260



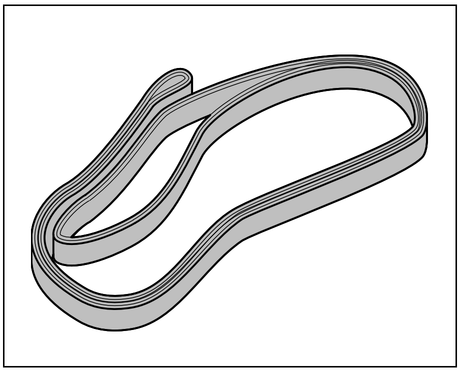
E 090 902 9279



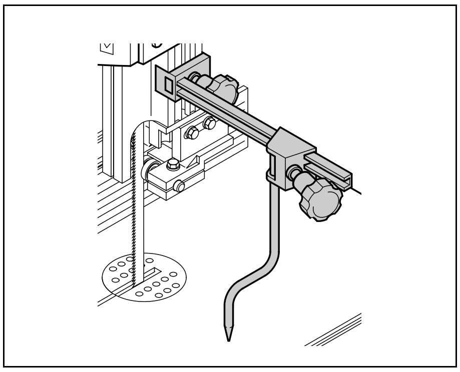
F 090 901 8811



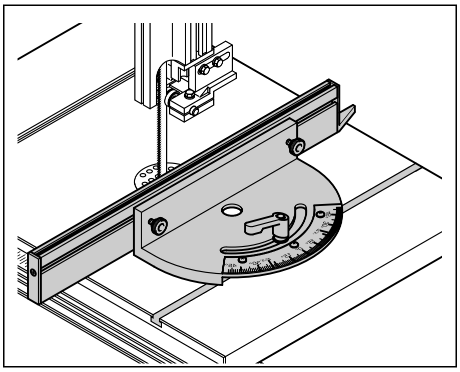
G 090 903 0528



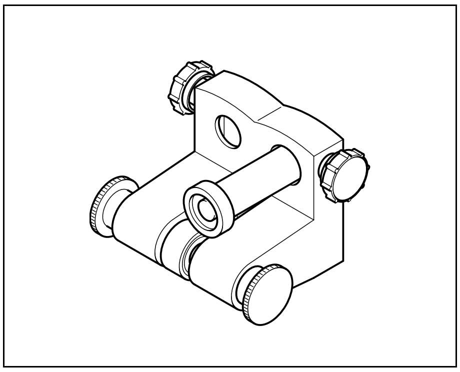
H 090 903 0536



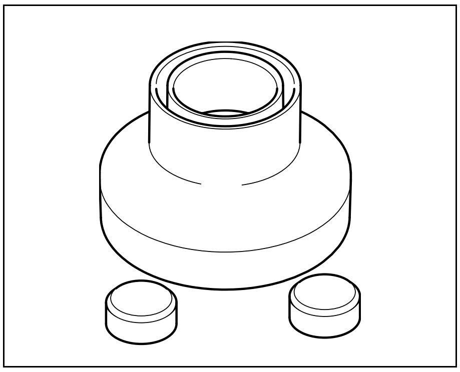
I 090 901 8366



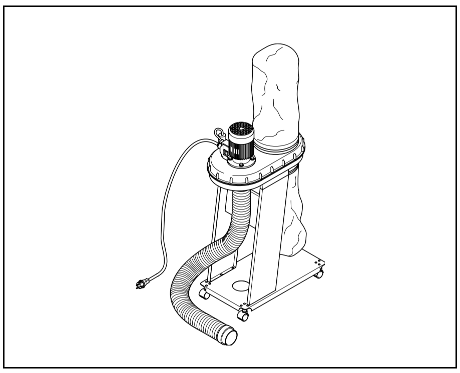
J 091 000 8048



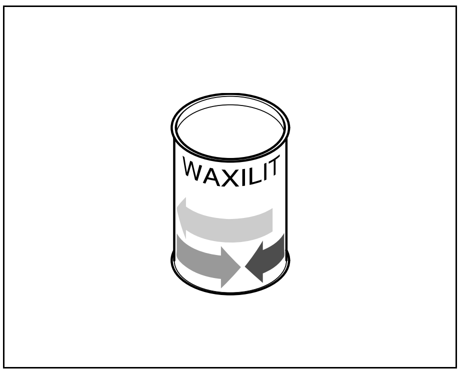
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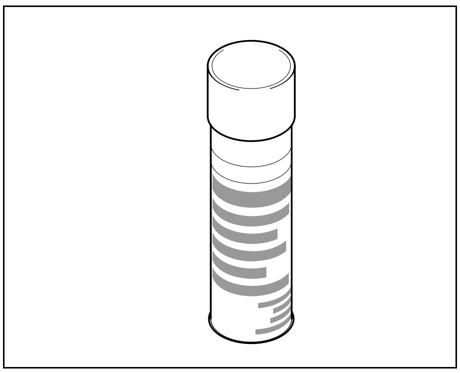
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N 431 306 2258



O 091 101 8691

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